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| 09/941,326 | 08/29/2001 | Timothy Roscoe | 1589a | 6834 |
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| KSOPHT0101-Z2100 | | | PAPER NUMBER | |
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DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,326

Applicant(s)

ROSCOE ET AL.

Examiner

Peter Poltorak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21, 24, 26-28, 30-38 and 42-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21, 24, 26-28, 30-38 and 42-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Amendment, and remarks therein, received on 8/11/2005 have been entered and carefully considered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Response to Amendment

3. Applicant's arguments have been carefully considered but they were not found persuasive.
4. As per the Double Patenting Rejection, the examiner acknowledges applicant's plans to allow U.S. Patent Application No. 09/728558 to go abandoned.
5. Although, the instant application continues to retain the Double Patenting Rejection as U.S. Patent Application No. 09/728558 remains pending, the rejection automatically will be invalidated upon application 09/728558 going abandoned.
6. Applicant argues that neither Pfleeger nor Wiegel disclose or suggest "providing at least a portion of the access-control logic to an interconnection system in response to an attempted inter-node communication involving the at least one service component (or between service components).
7. The examiner finds the argument not persuasive.
8. Pfleeger teaches a screening router that can allow or restrict inter-node communication based on network addresses and port numbers (Pfleeger, section 9.5 pg. 426-428). Computers operate using computer programs (known by various names, e.g. routines, applications, code etc.). The programs are responsible for

providing various functionalities to other programs allowing the computer to perform different tasks. Some of the programs may be related to programs that utilize local resources, others enable communication among programs located on other computers, e.g. programs implementing TCP/IP stack. One can think of it as programs providing services and in fact this nomenclature is commonly used e.g. in Windows operating systems.

9. In order for the communication to take place between two computers many programs are implemented providing various services (e.g. handshake which essentially is a connection establishment, session association etc.). For more details the examiner points to any network communication literature and for illustrative purposes attaches a brief summary of OSI and TCP/IP models (*Stallings, pg. 20-21*).
10. Firewalls (e.g. screening routers) control communication between devices as shown by Pfleeger in section 9.5. As a result in inter-node communication wherein a firewall is employed one must consider three types of players: service components that are located on the sender computer (inter-node) capable to initiate attempted inter-node communication, service components located on the receiving inter-node and allowing acceptance of inter-node communication traffic and an entity (firewall) overseeing (controlling according to set policies) the attempted communication.
11. Similarly, Wiegel's invention is essentially an interface to a data communication filtering mechanism (firewall) that is used by the mechanism to filter data pockets

based on the assigned rules (Wiegel, col. 2 lines 36-65, col. 4 lines 24-33, col. 11 lines 30-42).

12. Applicant argues that neither Pfleeger nor Wiegel disclose or suggest providing to the interconnection system, in response to an attempted inter-node communication between the application components, at least a portion of access-control rules that define allowed communication between the application components.
13. The examiner finds the argument not persuasive and points out that earlier presented arguments are relevant to this argument as well. Looking at communication layers (e.g. TCP/IP) it is clear that applications initiate data connections. In addition programs (services) discussed above are application components.
14. Applicant argues that neither Pfleeger nor Wiegel disclose or suggest "a session manager communicatively linked with the interconnection system, wherein the logic is located at least in part, in the session manager, and wherein the session manager provides at least a portion of the logic to the interconnection system in response to the attempted inter-node communication.
15. The examiner points out that Wiegel's invention deals with session operations, e.g. evaluates session requests (*col. 17 line 58- col. 18 line 40*). As a result there must be a session manager entity that manages operations associated with the sessions.
16. As per the argument in regard to Pfleeger and a screening router (Remarks, pg. 17-18) the examiner points out that a screening router is another name for a firewall and

as already discussed above the firewalls' purpose is to filter data based on established policies.

17. As per arguments directed to Wiegel's teaching (Remarks, pg. 18) the examiner points out that Wiegel's invention is essentially an interface to a data communication filtering mechanism (firewall) that is used by the mechanism to filter data based on the assigned rules (*Wiegel, col. 2 lines 36-65, col. 4 lines 24-33, col. 11 lines 30-42*). As a result, Wiegel's teaching is nothing less than an access-control logic/rules and when implemented by a computer (e.g. on a firewall machine as suggested in Wiegel in col.11 lines 33) it results in the acceptance/rejection of network packets.
18. Also, although Pfleeger does not explicitly discuss firewalls implementing session managers, firewalls that manage sessions are old and well known in the art, for example "Stateful Inspection" (e.g. *Freund U.S. Patent No. 5987611, col. 2 lines 15-58*) and one of ordinary skill in the art at the time of applicant's invention would have been motivated to employ the session manager in order to inspect the data packets transport protocol (e.g., TCP) header (and even the application level protocols) in an attempt to better understand the exact nature of the data exchange.
19. Summarizing, *Pfleeger's* teaches a screening router implementing a company's policies that screens communication allowing only the communication addressed to certain addresses (*Pfleeger, Screening Router, pg. 429-430. The examiner points out that although Pfleeger discusses Screening Router firewall type, the whole Firewall introduction pg. 426-428 is also relevant to applicant's limitations*). This

reads on "providing at least a portion of the access-control logic to an interconnection system in response to an attempted inter-node communication involving the at least one service component (or between service components)" and "providing to the interconnection system, in response to an attempted inter-node communication between the application components, at least a portion of access-control rules that define allowed communication between the application components".

20. Similarly, Wiegel's teaching of an information communication policy for the network device, and generating a set of instructions based on the symbolic representation of the policy, wherein the set of instructions causes the network device to selectively pass or reject messages according to the policy (Wiegel, col. 5 lines 12-23) also reads on "providing at least a portion of the access-control logic to an interconnection system in response to an attempted inter-node communication involving the at least one service component (or between service components)" and "providing to the interconnection system, in response to an attempted inter-node communication between the application components, at least a portion of access-control rules that define allowed communication between the application components".

21. Claims 1-21, 24, 26-28, 30-38 and 42-49 have been examined.

22. The effective filing date for the subject matter defined in the pending claims in this application is 02/28/2001.

Claim Rejections - 35 USC § 102

23. Claims 1, 13 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by *Pfleeger (Charles P. Pfleeger, "Security in Computing", ISBN 0133374866, 1996)*.
24. As per claims 1 and 13 Pfleeger teaches a screening router that can allow or restrict inter-node communication based on network addresses and port numbers (Pfleeger sec. 9.5 pg. 426-428).
25. The newly introduced limitation: "providing at least a portion of the access-control logic to the interconnection system in response to an attempted inter-node communication involving the at last one service component" is inherent. The main purpose of the firewalls (screening routers) is to allow or block inter-node communication and inter-node communications inherently involve multiple service components. As a result *Pfleeger's* teaches a screening router implementing a company's policies that screens communication allowing only the communication addressed to certain addresses (*Pfleeger, Screening Router, pg. 429-430. The examiner points out that although Pfleeger discusses Screening Router firewall type, the whole Firewall introduction pg. 426-428 is also relevant to applicant's limitations*). This reads on "providing at least a portion of the access-control logic to an interconnection system in response to an attempted inter-node communication involving the at least one service component (or between service components)" and "providing to the interconnection system, in response to an attempted inter-node communication between the application components, at least a portion of access-

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control rules that define allowed communication between the application components”.

26. Claims 1-8, 12-14, 21, 24, 26, 31-32, 34, 36-38, 43 and 46-49 are rejected under 35 U.S.C. 102(e) as being anticipated by *Wiegel* (U.S. Patent No. 6484261).

27. As per claims 1, 13, 37 and 38 *Wiegel* teaches a method for controlling a network device that passes or rejects information messages, the method comprising the computer-implemented steps of defining a set of symbols that identify logical operations that can be carried out by the network device; defining an information communication policy for the network device by graphically interconnecting one or more of the symbols into a symbolic representation of the policy; and generating a set of instructions based on the symbolic representation of the policy, wherein the set of instructions causes the network device to selectively pass or reject messages according to the policy (*Wiegel*, col. 5 lines 12-23).

28. *Wiegel*'s invention is essentially an interface to a data communication filtering mechanism (firewall) that is used by the mechanism to filter data packets based on the assigned rules (*Wiegel*, col. 2 lines 36-65, col. 4 lines 24-33, col. 11 lines 30-42).

29. Thus, *Weigel*'s teaching reads on establishing access control logic restricting inter-node communication involving the at least one service component based on the identity of at least one of the service components, applying the access-control logic to block an inter-node communication involving the at least one service component and on providing to the interconnection system, in response to an attempted inter-

node communication between the application components, at least a portion of access-control rules that define allowed communication between the application components.

30. As per claims 2-8, 12, 14-21, 24, 26, 28, 30-32, 34, 36, 38 and 46-48 *Wiegel* teaches that sites determine how security policies are applied, how networks are organized, and how network address translation works between two or more sites. How a network packet travels across two sites determines which security policies are applied. This traversal identifies the source and destination of the packet, thus identifying the point of origin as one site. Security policies that are applied to a particular site are enforced against all network packets that originate from that site (*col. 13 lines 14-22, col. 7 lines 45-54*). *Wiegel's* invention utilizes applications, IP addresses and ports related to source and destinations (*col. 7 lines 45-54*) and applies the controls to Internet communication (*col. 10 lines 44-67*). The system comprises a firewall, a router and a switch that enforce one or more network security policies and a policy translation agent responsible for translating or converting policies as represented in knowledge base into a form that can be understood by a firewall, a router or a switch (*Fig. 2, col. 11 lines 22-42*). *Wiegel's* implementation is associated with session operations, e.g. evaluates session requests (*col. 17 line 58-col. 18 line 40*). Before policies are implemented to allow or disallow interconnection system data flow they must be implemented on the computer that will implement the policies. Also, computers inherently utilize interrupt signals during computer operations, e.g. in order to switch from one task to another.

Claim Rejections - 35 USC § 103

31. Claims 9-11, 27, 33, 35, 42 and 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Wiegel* (U.S. Patent No. 6484261) in view of *Official Notice*.

32. As per claim 9 *Wiegel* does not explicitly teach that at least two processing nodes of the plurality of interconnected processing nodes run different operating systems.

Official Notice is taken that it is old and well-known practice to interconnect processing nodes running different operating systems.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to interconnect processing nodes running different operating systems.

One of ordinary skill in the art at the time of applicant's invention would have been motivated to utilize *Wiegel's* invention in the environment where interconnected processing nodes run different operating systems for the benefit of interoperability.

33. Claims 10 and 44-45 are substantially equivalent to claim 9; therefore claims 10 and 44-45 are similarly rejected.

34. As per claims 11, 33 and 42 *Wiegel* does not explicitly teach that the computing environment is a cluster-based computing environment.

Official Notice is taken that utilizing a cluster-based computing environment is old and well-known practice.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to utilize *Wiegel's* invention in a cluster-based computing environment.

One of ordinary skill in the art at the time of applicant's invention would have been

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motivated to employ a cluster-based computing environment to take advantage of communication accessibility.

35. As per claim 35 *Wiegel* does not teach an attempted inter-node communication comprising an attempted inter-node between antagonistic service components and application providers competing for business. Official notice is taken that it is old and well-known in the art that the Internet includes nodes with antagonistic service components hosted by many competing application providers. Thus, it is unrealistic to keep all of the nodes with antagonistic services out of the Internet connection. Therefore it would have been obvious that antagonistic serviced components would have competed.

36. As per claim 27 *Wiegel* teaches that the switch utilizes a policy translation agent to translate or to convert policies as represented in knowledge base into a form that can be understood by the switch. *Wiegel* does not explicitly teach the switch translating the instructions by itself.

Official Notice is taken that it is old and well-known practice to implement instruction translation on a device that implements the instruction.

37. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement instruction translation on a device that implements the instruction. One of ordinary skill in the art at the time of applicant's invention would have been motivated to employ translation of the instruction on the executing device in order to speed up the execution process.

38. *Wiegel* also does not teach that the switch can receive command-line instructions.

Official Notice is taken that it is old and well-known practice to provide computers with command line instructions that are interpreted/executed by the computers. One of ordinary skill in the art at the time of applicant's invention would have been motivated to employ command-line instructions to take advantage of quick access to and configuration of the switch.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571)272-

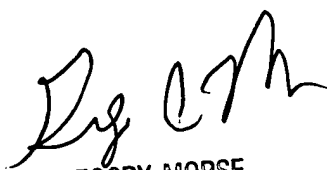
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3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571)272-3838. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Signature
10/27/05
Date


GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100